Remarks

Claims 1-9, 11-13 and 15-19, 21 and 22 are pending in the application and stand rejected.

Claim rejections

Section 103

Claims 1-9, 11-13, 15-19, 21 and 22 were rejected under 35 USC 103(a) as being unpatentable over Siegel, B. "Reliability and the Electronic Engineer", Intersil Corporation Application Note AN1104, March 24, 1994 ("Siegel") in view of Reliasoft's ALTA 1.0 On-Site Training Guide, © 1999 ("Reliasoft"). The Applicant respectfully traverses, for at least the reason that the cited references do not suggest the relationship $t_F = AF \times \exp(t_A)$ as required by independent claims 1, 21 and 22.

Equations 1, 2 and 3 of Siegel do not disclose or suggest the claimed relationship, $t_F = AF \times \exp(t_A)$. For one, equation 1 is a function of temperature, not time as in the claimed equation.

Additionally, even by rearranging the claimed equation in an effort to make it correspond to Siegel's equations, no correspondence can be obtained. The calculation performed in Siegel in the example shown below equation 3 is as follows:

MTBF(at 25 °C) = R2/R1(at 25 °C, 125 °C)x MTBF(at 25 °C)

which can be written as

MTBF(at 25 °C)/ MTBF(at 25 °C) = R2/R1(at 25 °C, 125 °C), or more concisely,

MTBF2/ MTBF1 = R2/R1

Assuming only for purposes of discussion that MTBF2 corresponds to t_F and t_A corresponds to MTBF1, rearranging the claimed equation to have t_F in the numerator and t_A in the denominator yields

$$\ln(t_F) = \ln(AF \times \exp(t_A)) = \ln(AF) + \ln(\exp(t_A)) = \ln(AF) + t_A$$

Therefore,

$$t_A = \ln(t_F) - \ln(AF)$$

and

$$t_F / t_A = AF \times \exp(t_A) / [\ln(t_F) - \ln(AF)]$$

It can be seen that the above in no way resembles R2/R1 (i.e., equation 1 of Siegel), which has a completely different form.

Reliasoft is only cited as showing a software implementation and does not remedy the deficiencies in Siegel.

In view of the foregoing, withdrawal of the asserted rejection is respectfully requested.

Claims 1-5, 21 and 22 were further rejected under 35 USC 103(a) as being unpatentable over Weibull.com, "Arrhenius Relationship Introduction", printed from the 4/23/2001 archived version of the Weibull.com website stored at Archive.org ("Weibull") in view of Reliasoft. The Applicant respectfully traverses, for at least the reason that the cited references do not suggest the relationship $t_F = AF \times \exp(t_A)$ as required by independent claims 1, 21 and 22. Weibull merely discloses the so-called "Arrhenius Relationship," which models a chemical reaction rate in terms of temperature. This has no bearing on the life of a product, which is the subject of the present claims. The Examiner equates the variables B/V in Weibull's $L(V)= Ce^{(B/V)}$ to the claimed t_A parameter. However, as the Examiner observes, Weibull describes the V parameter as representing stress level formulated for temperature and temperature values in absolute units, i.e., degrees Kelvin or degrees Rankine. Assuming only for purposes of discloses that L(V) has units of time, $L(V)= Ce^{(B/V)}$ then yields a time as a function of a temperature parameter. This does not parallel $t_F = AF \times \exp(t_A)$, which instead yields a time as a function of another time parameter.

Reliasoft is, again, only cited as showing a software implementation and does not remedy the deficiencies in Weibull.

In view of the foregoing, withdrawal of the asserted rejection is respectfully requested.

Conclusion

In light of the above discussion, Applicant respectfully submits that the present application is in all aspects in allowable condition, and earnestly solicits favorable reconsideration and early issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned at (202) 220-4323 to discuss any matter concerning this application. The Office is authorized to charge any fees related to this communication to Deposit Account No. 11-0600.

Respectfully submitted,

Dated: May 22, 2006

By: _____
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